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1				5					10					15		
tac	aag	ata	aag	gac	ctg	aaa	tta	tcg	ttg	ccc	ggc	acg	aac	aaa	acg	96
Tyr	Lys	Ile	Lys	Asp	Leu	Lys	Leu	Ser	Leu	Pro	Gly	Thr	Asn	Lys	Thr	
			20					25					30			
cag	caa	ttc	atg	gcc	caa	gca	gtc	ggc	cgt	tta	act	gga	aaa	ccg	gga	144
Gln	Gln	Phe	Met	Ala	Gln	Ala	Val	Gly	Arg	Leu	Thr	Gly	Lys	Pro	Gly	
		35					40					45				
gtc	gtg	tta	gtc	aca	tca	gga	ccg	ggt	gcc	tct	aac	ttg	gca	aca	ggc	192
Val	Val	Leu	Val	Thr	Ser	Gly	Pro	Gly	Ala	Ser	Asn	Leu	Ala	Thr	Gly	
	50					55					60					
ctg	ctg	aca	gcg	aac	act	gaa	gga	gac	cct	gtc	ggt	gcg	ctt	gct	gga	240
Leu	Leu	Thr	Ala	Asn	Thr	Glu	Gly	Asp	Pro	Val	Val	Ala	Leu	Ala	Gly	
65					70					75					80	
aac	gtg	atc	cgt	gca	tat	cgt	tta	aaa	cgg	aca	cat	caa	tct	ttg	gat	288
Asn	Val	Ile	Arg	Ala	Tyr	Arg	Leu	Lys	Arg	Thr	His	Gln	Ser	Leu	Asp	
				85					90					95		
aat	gcg	gcg	cta	ttc	cag	ccg	att	aca	aaa	tac	agt	gta	gaa	gtt	caa	336
Asn	Ala	Ala	Leu	Phe	Gln	Pro	Ile	Thr	Lys	Tyr	Ser	Val	Glu	Val	Gln	
			100				105						110			
gat	gta	aaa	aat	ata	ccg	gaa	gct	gtt	aca	aat	gca	ttt	agg	ata	gcg	384
Asp	Val	Lys	Asn	Ile	Pro	Glu	Ala	Val	Thr	Asn	Ala	Phe	Arg	Ile	Ala	
		115					120					125				
tca	gca	ggg	cag	gct	ggg	gcc	gct	ttt	gtg	agc	ttt	ccg	caa	gat	gtt	432
Ser	Ala	Gly	Gln	Ala	Gly	Ala	Ala	Phe	Val	Ser	Phe	Pro	Gln	Asp	Val	
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gtg aat gaa gtc aca aat acg aaa aac gtg cgt gct gtt gca gcg cca 480
Val Asn Glu Val Thr Asn Thr Lys Asn Val Arg Ala Val Ala Ala Pro
145 150 155 160

aaa ctc ggt cct gca gca gat gat gca atc agt gcg gcc ata gca aaa 528
Lys Leu Gly Pro Ala Ala Asp Asp Ala Ile Ser Ala Ala Ile Ala Lys
165 170 175

atc caa aca gca aaa ctt cct gtc gtt ttg gtc ggc atg aaa ggc gga 576
Ile Gln Thr Ala Lys Leu Pro Val Val Leu Val Gly Met Lys Gly Gly
180 185 190

aga ccg gaa gca att aaa gcg gtt cgc aag ctt ttg aaa aag gtt cag 624
Arg Pro Glu Ala Ile Lys Ala Val Arg Lys Leu Leu Lys Lys Val Gln
195 200 205

ctt cca ttt gtt gaa aca tat caa gct gcc ggt acc ctt tct aga gat 672
Leu Pro Phe Val Glu Thr Tyr Gln Ala Ala Gly Thr Leu Ser Arg Asp
210 215 220

tta gag gat caa tat ttt ggc cgt atc ggt ttg ttc cgc aac cag cct 720
Leu Glu Asp Gln Tyr Phe Gly Arg Ile Gly Leu Phe Arg Asn Gln Pro
225 230 235 240

ggc gat tta ctg cta gag cag gca gat gtt gtt ctg acg atc ggc tat 768
Gly Asp Leu Leu Leu Glu Gln Ala Asp Val Val Leu Thr Ile Gly Tyr
245 250 255

gac ccg att gaa tat gat ccg aaa ttc tgg aat atc aat gga gac cgg 816
Asp Pro Ile Glu Tyr Asp Pro Lys Phe Trp Asn Ile Asn Gly Asp Arg
260 265 270

aca att atc cat tta gac gag att atc gct gac att gat cat gct tac 864
Thr Ile Ile His Leu Asp Glu Ile Ile Ala Asp Ile Asp His Ala Tyr
275 280 285

cag cct gat ctt gaa ttg atc ggt gac att ccg tcc acg atc aat cat 912
Gln Pro Asp Leu Glu Leu Ile Gly Asp Ile Pro Ser Thr Ile Asn His
290 295 300

atc gaa cac gat gct gtg aaa gtg gaa ttt gca gag cgt gag cag aaa 960
Ile Glu His Asp Ala Val Lys Val Glu Phe Ala Glu Arg Glu Gln Lys
305 310 315 320

atc ctt tct gat tta aaa caa tat atg cat gaa ggt gag cag gtg cct 1008
Ile Leu Ser Asp Leu Lys Gln Tyr Met His Glu Gly Glu Gln Val Pro
325 330 335

gca gat tgg aaa tca gac aga gcg cac cct ctt gaa atc gtt aaa gag 1056
Ala Asp Trp Lys Ser Asp Arg Ala His Pro Leu Glu Ile Val Lys Glu
340 345 350

ttg cgt aat gca gtc gat gat cat gtt aca gta act tgc gat atc ggt 1104
Leu Arg Asn Ala Val Asp Asp His Val Thr Val Thr Cys Asp Ile Gly
355 360 365

tgc cac tcc att tgg atg tca cgt tat ttc cgc agc tac gag ccg tta 1152
Ser His Ser Ile Trp Met Ser Arg Tyr Phe Arg Ser Tyr Glu Pro Leu
370 375 380

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 Thr Leu Met Ile Ser Asn Gly Met Gln Thr Leu Gly Val Ala Leu Pro
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 Trp Ala Ile Gly Ala Ser Leu Val Lys Pro Gly Glu Lys Val Val Ser
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 gtc tct ggt gac ggc ggt ttc tta ttc tca gca atg gaa tta gag aca 1296
 Val Ser Gly Asp Gly Gly Phe Leu Phe Ser Ala Met Glu Leu Glu Thr
 420 425 430

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 Ala Val Arg Leu Lys Ala Pro Ile Val His Ile Val Trp Asn Asp Ser
 435 440 445

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 Thr Tyr Asp Met Val His Phe Gln Gln Leu Lys Lys Tyr Asn Arg Thr
 450 455 460

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 Ser Ala Val Asp Phe Gly Asn Ile Asp Ile Val Lys Tyr Ala Glu Ser
 465 470 475 480

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 Phe Gly Ala Thr Ala Leu Arg Val Glu Ser Pro Asp Gln Leu Ala Asp
 485 490 495

 gtt ctg cgt caa ggc atg aac gct gaa ggt cct gtc atc atc gat gtc 1536
 Val Leu Arg Gln Gly Met Asn Ala Glu Gly Pro Val Ile Ile Asp Val
 500 505 510

 ccg gtt gac tac agt gat aac att aat tta gca agt gac aag ctt ccg 1584
 Pro Val Asp Tyr Ser Asp Asn Ile Asn Leu Ala Ser Asp Lys Leu Pro
 515 520 525

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<211> 540

<212> PRT

<213> Bacillus subtilis

<400> 87

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Gln Gln Phe Met Ala Gln Ala Val Gly Arg Leu Thr Gly Lys Pro Gly
 35 40 45

Val Val Leu Val Thr Ser Gly Pro Gly Ala Ser Asn Leu Ala Thr Gly
 50 55 60

Leu Leu Thr Ala Asn Thr Glu Gly Asp Pro Val Val Ala Leu Ala Gly
 65 70 75 80